

ABSTRACT OF THE INVENTION

A novel polypeptide, osteoprotegerin binding protein, involved in osteoclast maturation has  
5 been identified based upon its affinity for  
osteoprotegerin. Nucleic acid sequences encoding the  
polypeptide, or a fragment, analog or derivative  
thereof, vectors and host cells for production, methods  
of preparing osteoprotegerin binding protein, and  
10 binding assays are also described. Compositions and  
methods for the treatment of bone diseases such as  
osteoporosis, bone loss due to arthritis or metastasis,  
hypercalcemia, and Paget's disease are also provided.

Receptors for osteoprotegerin binding  
15 proteins are also described. The receptors, and  
agonists and antagonists thereof, may be used to treat  
bone diseases.